D 92218 (Pages : 3) Name.....

Reg. No.....

THIRD SEMESTER B.Com./B.B.A. DEGREE EXAMINATION NOVEMBER 2015

(CUCBCSS—UG)

Common Course

A 11—BASIC NUMERICAL SKILLS

Time : Three Hours Maximum : 80 Marks

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

I. Choose the correct answer :

1 The middle most item of a distribution is :

(a) Mean. (b) Mode.

(c) Median. (d) None of these.

2 Reciprocal of X values is related with :

(a) Harmonic Mean. (c) Linear equation.

(b) Mean deviation. (d) All of the above.

3 Which of the following is a measure of central tendency ?

(a) Standard deviation. (b) Range.

(c) Median. (d) Kurtosis.

4 The median of 35, 23, 45, 50, 80, 61, 92, 40, 52, 61 :

(a) 51. (b) 80.

(c) 50. (d) 40.

5 The compound interest for Rs. 7,000 for 4 years ,interest payable half yearly at 6 % is :

(a) 1,867. (b) 1,000.

(c) 300. (d) 2,000.

II. Fill in the blanks :—

6 A set which contains no elements is ———.

7 ——— ignores + or – sign while computing measure of dispersion.

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8 If A = {1, 2, 3} B = {2, 5,} then A ∪ B is _____.

9 _____ is considered as the ideal index number.

10 The second term of G P series is 9 and the fifth term is 243, the fourth term of series is _____.

(10 × 1 = 10 marks)

Part B (Short Answer Questions)

Answer any **eight** *questions.*
Each question carries 2 *marks.*

11 The sum of three continuous terms in G P is 35 and their product is 1000. Find the terms.

12 What do you mean by harmonic Mean ?

13 What is an index number ?

14 If U = {1, 2, 3, 4, 5} and A = {2, 4, 5}, Find A^c.

15 If $A = \begin{bmatrix} 1 & -3 & 2 \\ 0 & 3 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 5 & 6 \\ 1 & 1 & -2 \end{bmatrix}$ find 2A – 3B.

16 Represent, A ∪ B A ? B, and A – B by means of venn diagram.

17 Solve $5x^2 - 125 = 0$.

18 Of the 100 borders of a hostel 80 drink tea , 40 drink coffee and 20 drink tea and coffee. How many of them drink neither tea nor coffee ?

19 Explain the limitations of statistics.

20 Explain the uses of index numbers.

(8 × 2 = 16 marks)

Part C

Answer any **six** *questions.*
Each question carries 4 *marks.*

21 Find an appropriate index from the following data :—

Items	Price 2004	Price 2007	Quantity consumed
A	2	4	3
B	8	9	5
C	7	8	8
D	5	6	2

22 If $A\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix}$ and $B\begin{bmatrix}5 & 6\\ 0 & -2\end{bmatrix}$ verify whether AB = BA.

23 Draw a histogram to the frequency distribution showing the ages of people :

Ages	:	10 – 15	15 – 20	20 – 30	30 – 40	40 – 50	50 – 75	75 – 100
Frequency	:	4	12	20	18	14	25	10

24 By means of Venn diagram, prove that $(A \cap B) = A' \cup B'$ (Demorgan's law).

25 Find the standard deviation and co-efficient of variation of the values

10, 12, 80, 70, 60, 100, 0, 4.

26 What are the main types bar diagram ?

27 The population of a country increases every year by 2.4 % of the population at the beginning of that year. In what time will the population double itself ? Answer to the nearest year.

28 What are the functions of statistics

(6 × 4 = 24 marks)

Part D (Essay Questions)

Answer any **two** *questions.*

Each question carries 15 *marks.*

29 With median as the base calculate the mean deviation and compare the variability of the two series A and B :

Series A :	3484	4572	4124	3682	5624	4388	3680	4308
Series B :	487	508	620	382	408	266	186	218

30 Find the two numbers whose sum is 18 and product is 72.

31 Explain in detail the steps in statistical investigation.

(2 × 15 = 30 marks)